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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/676,952	09/30/2003	Vugranam C. Sreedhar	YOR920030353US1 (590.113)	8133
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FERENCE & ASSOCIATES LLC 409 BROAD STREET PITTSBURGH, PA 15143			EXAMINER	
			KISS, ERIC B	
			ART UNIT	PAPER NUMBER
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/676,952	Applicant(s) SREEDHAR, VUGRANAM C.
	Examiner ERIC B. KISS	Art Unit 2192

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
 - If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
 - Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) Responsive to communication(s) filed on 23 December 2008.
- 2a) This action is FINAL. 2b) This action is non-final.
- 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) Claim(s) 1-21 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) Claim(s) _____ is/are allowed.
- 6) Claim(s) 1-21 is/are rejected.
- 7) Claim(s) _____ is/are objected to.
- 8) Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) The specification is objected to by the Examiner.
- 10) The drawing(s) filed on _____ is/are: a) accepted or b) objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) All b) Some * c) None of:
 1. Certified copies of the priority documents have been received.
 2. Certified copies of the priority documents have been received in Application No. _____.
 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) Notice of References Cited (PTO-892)
 2) Notice of Draftsperson's Patent Drawing Review (PTO-948)
 3) Information Disclosure Statement(s) (PTO/SB/08)
 Paper No(s)/Mail Date _____
- 4) Interview Summary (PTO-413)
 Paper No(s)/Mail Date _____
- 5) Notice of Informal Patent Application
 6) Other: _____

DETAILED ACTION

1. The reply filed December 23, 2008, has been received and entered. Claims 1-21 are pending.

Response to Arguments / Amendments

2. The rejection of claims 11-21 under 35 U.S.C. § 101 has been clarified in view of the *Bilski* decision. *In re Bilski*, 545 F.3d 943 (Fed. Cir. 2008) (en banc). The rejection of claims 1-10 under § 101 has been withdrawn. However, new grounds of rejection under 35 U.S.C. § 112 are introduced below.
3. In response to applicant's request for suggestions as to how the rejections under § 101 may be overcome, the examiner unfortunately has no such suggestions.

Claim Rejections - 35 USC § 112

4. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.
5. Claims 1-10 and 21 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

The specification does not adequately describe "providing a user with a software artifact" or "allowing the user to add features to the software artifact" as being any form of concrete acts

reasonably capable of being performed by a machine executing specific instructions, as recited in independent claims 1 and 21.

6. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

7. Claims 1-21 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

It is unclear from the disclosure what concrete acts, if any, are involved in the claimed method steps of “providing the user with a software artifact” and “allowing the user to add features to the software artifact”. Because the unspecified acts associated with “providing” or “allowing” or even their necessary effect are not clear upon considering the claims as a whole in light of the specification, one of ordinary skill in the art would not be apprised of the scope of the claims and, therefore, the claims would fail to serve the notice function required by 35 U.S.C. § 112, second paragraph, by providing clear warning to others as to what would constitute infringement of a resulting patent. *See, e.g., Solomon v. Kimberly-Clark Corp.*, 216 F.3d 1372, 1379 (Fed. Cir. 2000).

Claim Rejections - 35 USC § 101

8. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

9. Claims 11-21 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter.

A claim that requires one or more acts to be performed defines a process. However, not all processes are statutory under 35 U.S.C. § 101. To be statutory, a claimed process must either: (1) be tied to a particular machine or apparatus, or (2) transform a particular article into a different state or thing. *In re Bilski*, 545 F.3d 943, 954 (Fed. Cir. 2008) (en banc).

If the limitations tying the process to a computer are not actually limiting, i.e., they do not reduce the preemptive footprint of the claim, then the process is not sufficiently tied to a particular machine or apparatus to be statutory. *Id.* at 955 (citing *Gottschalk v. Benson*, 409 U.S. 63, 71-72 (1972)). Mere field-of-use limitations are generally insufficient to render an otherwise ineligible process claim patent-eligible. *Id.* at 957 (citing *Diamond v. Diehr*, 450 U.S. 175, 191-192 (1981)). Nor will insignificant extrasolution activity render such a process statutory. *Id.* (citing *Diehr*, 450 U.S. at 191-92; *In re Schrader*, 22 F.3d 290, 294 (Fed. Cir. 1994)).

Regarding transformation of data, the en banc panel in *Bilski* noted that an algorithm (an unpatentable fundamental principle) merely combined with a data-gathering step was non-statutory because, “A requirement simply that data inputs be gathered—without specifying how—is a meaningless limit on a claim to an algorithm because every algorithm inherently requires the gathering of data inputs,” and, “Further, the inherent step of gathering data can also fairly be characterized as insignificant extra-solution activity.” *Id.* at 963 (citing *Parker v. Flook*, 437 U.S. 584, 590 (1978)). Further, transformations of abstractions do not meet the test for transformation of an article to a different state or thing because, “[Such abstractions] are not physical objects or substances, and they are not representative of physical objects or substances.” *Id.* at 963-64.

For a claimed process to be patent-eligible, the use of a specific machine or transformation of an article must impose meaningful limits on the claim's scope, and the involvement of the machine or transformation in the claimed process must not merely be insignificant extra-solution activity. *Id.* at 961-62.

Claims 11-20 are directed to methods for allowing a user to model at least one variation of a software artifact. The individual steps are not tied to a particular machine, nor do they transform any article to a different state or thing. The only recitation of a machine in the claims is in the preamble, where the method is recited as being, "computer implemented." This recitation is so generic as to encompass any computing system, such that anyone who performed this method in practice would fall within the scope of these claims. Thus, the recitation of a computer in the preamble is not, in fact, a limitation at all to the scope of the claim, and the claim is directed, in essence, to the method performed by any means.

Descriptive material can be characterized as either "functional descriptive material" or "nonfunctional descriptive material." In this context, "functional descriptive material" consists of data structures and computer programs which impart functionality when employed as a computer component. (The definition of "data structure" is "a physical or logical relationship among data elements, designed to support specific data manipulation functions." The New IEEE Standard Dictionary of Electrical and Electronics Terms 308 (5th ed. 1993).) "Nonfunctional descriptive material" includes but is not limited to music, literary works and a compilation or mere arrangement of data. Both types of "descriptive material" are nonstatutory when claimed as descriptive material *per se*. *In re Warmerdam*, 33 F.3d 1354, 1361, 31 USPQ2d 1754, 1760 (claim to a data structure *per se* held nonstatutory).

Data structures not claimed as embodied in computer-readable media are descriptive material *per se* and are not statutory because they are not capable of causing functional change in the computer. *See, e.g., In re Warmerdam*, 33 F.3d 1354, 1361, 31 USPQ2d 1754, 1760 (claim to a data structure per se held nonstatutory). Such claimed data structures do not define any structural and functional interrelationships between the data structure and other claimed aspects of the invention which permit the data structure's functionality to be realized. In contrast, a claimed computer-readable medium encoded with a data structure defines structural and functional interrelationships between the data structure and the computer software and hardware components which permit the data structure's functionality to be realized, and is thus statutory.

Similarly, computer programs claimed as computer listings *per se*, *i.e.*, the descriptions or expressions of the programs, are not physical "things." They are neither computer components nor statutory processes, as they are not "acts" being performed. Such claimed computer programs do not define any structural and functional interrelationships between the computer program and other claimed elements of a computer which permit the computer program's functionality to be realized. In contrast, a claimed computer-readable medium encoded with a computer program is a computer element which defines structural and functional interrelationships between the computer program and the rest of the computer which permit the computer program's functionality to be realized, and is thus statutory. *See In re Lowry*, 32 F.3d 1579, 1583-84, 32 USPQ2d 1031, 1035.

When nonfunctional descriptive material is recorded on some computer-readable medium, in a computer or on an electromagnetic carrier signal, it is not statutory since no requisite functionality is present to satisfy the practical application requirement. Merely claiming

nonfunctional descriptive material, i.e., abstract ideas, stored on a computer-readable medium, in a computer, or on an electromagnetic carrier signal, does not make it statutory. *See Diamond v. Diehr*, 450 U.S. at 185-86, 209 USPQ at 8 (noting that the claims for an algorithm in Benson were unpatentable as abstract ideas because “[t]he sole practical application of the algorithm was in connection with the programming of a general purpose computer.”). Such a result would exalt form over substance. *In re Sarkar*, 588 F.2d 1330, 1333, 200 USPQ 132, 137 (CCPA 1978) (“[E]ach invention must be evaluated as claimed; yet semantogenic considerations preclude a determination based solely on words appearing in the claims. In the final analysis under § 101, the claimed invention, as a whole, must be evaluated for what it is.”). *See also In re Johnson*, 589 F.2d 1070, 1077, 200 USPQ 199, 206 (CCPA 1978) (“form of the claim is often an exercise in drafting”).

Claim 21 recites on its face a program storage device containing executable instructions for carrying out a method comprising the acts of “providing the user with a software artifact” and “allowing the user to add features to the software artifact”. However, as noted in previous Office actions, presumably allowing a user to do something is not the same as causing an action to be performed by a machine. Similarly, providing a software artifact is not the same as actively creating a result through the function of a machine. As such, the various “steps” recited in claim 21 appear to be entirely passive, i.e., non-functional, in nature rather than functional descriptive material capable of forming a statutory invention when recorded on a computer-readable medium.

Conclusion

10. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

11. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Eric B. Kiss whose telephone number is (571) 272-3699. The examiner can normally be reached on Tue. - Fri., 7:00 am - 4:30 pm. The examiner can also be reached on alternate Mondays.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Tuan Dam, can be reached on (571) 272-3695. The fax phone number for the organization where this application or proceeding is assigned is (571) 273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Eric B. Kiss/
Eric B. Kiss
Primary Examiner, Art Unit 2192